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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,478	07/08/2003	James W. Ridout	41770-0203	9604

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EXAMINER	
XU, LING X	
ART UNIT	**PAPER NUMBER**
1775	

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/616,478	RIDOUT ET AL.	
	Examiner	Art Unit	
	Ling X. Xu	1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) *133-159* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *See Continuation Sheet* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/21/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are Claims 1, 3, 6-7, 12-13, 18-19, 24-25, 30-31, 36-37, 42-43, 47-49, 53-54, 58-59, 61-62, 70-71, 73-74, 82-83, 88-89, 93-96, 98-99, 101-102, 104-105, 107-108, 110-111, 113-114, 116-117, 119-120, 122-123, 125-126, 128-129, 131-163 (claims 160-163 are renumbered claims) .

Continuation of Disposition of Claims: Claims rejected are Claims 1, 3, 6-7, 12-13, 18-19, 24-25, 30-31, 36-37, 42-43, 47-49, 53-54, 58-59, 61-62, 70-71, 73-74, 82-83, 88-89, 93-96, 98-99, 101-102, 104-105, 107-108, 110-111, 113-114, 116-117, 119-120, 122-123, 125-126, 128-129, 131-132 and 160-163 (claims 160-163 are renumbered claims) .

DETAILED ACTION

Response to Amendment

1. Applicants' amendments filed on 11/18/2005 have been entered.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 133 (new)-136 (new) been renumbered 160 (new)-163(new).

Applicant must submit a list of claims with corrected claim numbers in response to this Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3, 6-7, 12-13, 18-19, 24-25, 30-31, 36-37, 42-43, 47-49, 53-54, 58-59, 61-62, 70-71, 73-74, 82-83, 88-89, 93-96, 98-99, 101-102, 104-105, 107-108, 110-111, 113-114, 116-117, 119-120, 122-123, 125-126, 128-129, 131-132 and 160-163 (claims 160-163 are renumbered claims) are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly added limitation, which the copper present in said alloy in an amount greater than about 5.0 atomic, is not sufficiently described in or supported by the specification. Accordingly, the newly added limitation is considered a new matter.

If the limitation is explicitly supported by the original disclosure, applicants should indicate the page and line numbers where support is found. If support is considered to be implicit, applicants should clearly explain how this limitation is derived from the original disclosure. Any unsupported limitations are required to be deleted from the claims.

4. Claims 1, 3, 6-7, 12-13, 18-19, 24-25, 30-31, 36-37, 42-43, 47-49, 53-54, 58-59, 61-62, 70-71, 73-74, 82-83, 88-89, 93-96, 98-99, 101-102, 104-105, 107-108, 110-111, 113-114, 116-117, 119-120, 122-123, 125-126, 128-129, 131-132 and 160-163 (claims 160-163 are renumbered claims) are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The newly added limitation, which the copper is present in said alloy in an amount greater than about 5.0 atomic, is not sufficiently described in the specification to enable one skilled in the art to make and/or use the claimed invention.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 6-7, 12-13, 18-19, 24-25, 30-31, 36-37, 42-43, 47-49, 53-54, 58-59, 61-62, 70-71, 73-74, 82-83, 88-89, 93-96, 98-99, 101-102, 104-105, 107-108, 110-111, 113-114, 116-117, 119-120, 122-123, 125-126, 128-129, 131-132 and 160-163 (renumbered claims) are rejected under 35 U.S.C. 102(a) or 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Nee (US 2002/0034603).

With respect to claims 1, 3, 6-7, 12-13, 18-19, 24-25, 30-31, 36-37, 42-43, 47-49, Nee discloses a reflective or semi-reflective coating comprising silver-based alloy such as silver-based zinc alloy having 85-99.99% of silver and 0.1-15% of zinc (see [0054]). The silver based zinc alloy may further alloyed with precious metal such as copper in the range of 0.01 to 5.0% of

the amount of silver present (see [0057]). Other metals such as tin and silicon may also included in the silver-based alloy in the range of 0.01-5.0% of the amount of silver present (see [0057]).

With respect to claims 53-54, 58-59, 61-62, 70-71, 73-74, 82-83, 88-89 and 160-163, Nee discloses a reflective or semi-reflective coating comprising silver-based alloy such as silver-based zinc alloy having 85-99.99% of silver and 0.1-15% of zinc (see [0054]). The silver based zinc alloy may further alloyed with other metals such as tin and silicon in the range of 0.01-5.0% of the amount of silver present (see [0057]).

With respect to claims 93-96, 98-99, 101-102, 104-105, 107-108, 110-111, 113-114, 116-117, 119-120, 122-123, 125-126, 128-129, 131-132, Nee discloses a reflective or semi-reflective coating comprising silver-based alloy such as silver-based zinc alloy having 85-99.99% of silver (see [0054]). The silver based zinc alloy may further alloyed with precious metal such as copper in the range of 0.01 to 5.0% of the amount of silver present (see [0057]). Other metals such as tin and silicon may also included in the silver-based alloy in the range of 0.01-5.0% of the amount of silver present (see [0057]).

With respect to the newly added limitation, which the copper is present in said alloy in an amount greater than about 5.0 atomic percent, Nee discloses that the copper content is about 0.01-5.0 atomic percent (see [0057]).

It is the Examiner's position that the copper content range greater than about 5.0% allowed for concentrations slightly below 5%, thus the copper range of 0.01-5.0 disclosed by Nee overlaps the claimed range. Accordingly, the range of the copper content taught by Nee anticipates the claimed range of greater than about 5.0%, or in the alternative, it would have been

obvious to one of ordinary skill in the art to have the coating with the amount of copper as claimed because, when the claimed range and the prior art range are very similarly, the range of the prior art establishes *prima facie* obviousness. One of ordinary skill in the art would have expected the similar ranges to have the same properties. *See in re Peterson,* 65 USPQ2d 1379, 1382, citing *titanium Metals Corp. V. Banner*, 227 USPQ 773, 779.

It has been well settled that overlapping ranges have been found to be obvious variants without the support of unexpected results. *In re Wertheim*, 541 F.2d 257, 191USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed.Cir. 1990), also see MPEP 2144.05. (The prior art taught carbon monoxide concentrations of "about 1-5%" while the claim was limited to "more than 5%." The court held that "about 1-5%" allowed for concentrations slightly above 5% thus the ranges overlapped.); In re Geisler, 116 F.3d1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997) (Claim reciting thickness of a protective layer as falling within a range of "50 to 100 Angstroms" considered prima facie obvious in view of prior art reference teaching that "for suitable protection, the thickness of the protective layer should be not less than about 10 nm [i.e., 100 Angstroms]." The court stated that "by stating that suitable protection' is provided if the protective layer is about' 100 Angstroms thick, [the prior art reference] directly teaches the use of a thickness within [applicant's] claimed range."). Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Court held as proper a rejection of a claim directed to an alloy of "having 0.8% nickel, 0.3% molybdenum, up to 0.1% iron, balance titanium" as obvious over a reference

disclosing alloys of 0.75% nickel, 0.25% molybdenum, balance titanium and 0.94% nickel, 0.31% molybdenum, balance titanium.).

Response to Arguments

6. Applicant's arguments filed 11/18/2005 have been fully considered but they are not persuasive.

Applicant argues that the claimed alloy has a copper content of greater than about 5.0 atomic percent. Nee states that the maximum copper content of the disclosed alloys is about 5.0% atomic percent.

First, as stated above, the newly added limitation is not sufficiently described in or supported by the specification and is considered a new matter.

Secondly, as also stated above, the range of the copper content taught by Nee anticipates the claimed range of greater than about 5.0% because the copper content range greater than about 5.0% allowed for concentrations slightly below 5%, or in the alternative, it would have been obvious to one of ordinary skill in the art to coating with the amount of copper as claimed because, when the claimed range and the prior art range are very similarly, the range of the prior art establishes *prima facie* obviousness because one of ordinary skill in the art would have expected the similar ranges to have the same properties.

Applicant also argues that the presently claimed alloys would not be obvious over Nee, since raising the copper composition would change the properties of the alloys. Nee teaches

against a higher copper content because, in paragraph [0010], Nee states that copper-based alloys have suboptimal corrosion resistance.

It should be noted that Nee states, in paragraph [0010], when discuss the background of the invention, a copper-based alloy disclosed in the prior art having difference properties compared to the aluminum alloy. Copper-based alloy is very different from silver-based alloy having minor copper content, which is claimed in the present application and disclosed in Nee. There is no evidence in Nee that the silver-based alloy having copper in an amount greater that about 5.0 atomic percent would have different properties than the silver based alloy having copper in amount less than about 5.0 atomic percent. Accordingly, Applicant's statement that Nee teaches against a higher copper content is incorrect.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 571-272-1546. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ling X. Xu
Primary Examiner
Art Unit 1775

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